Applicant : Akiharu MIYANAGA et al. Attorney's Docket No.: 07977-0254003 / US3823D1D1

Serial No.: 10/667,899

Filed : September 23, 2003 Page : 2 of 6

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

- 1-42. (Canceled)
- 43. (Previously Presented) A semiconductor device comprising:
- a semiconductor substrate:
- a channel region formed in said semiconductor substrate:

source and drain regions in said semiconductor substrate wherein said channel region is located between said source and drain regions;

at least first and second impurity regions formed in said channel region, wherein said first and second impurity regions are in contact with the source region and are separated from each other;

at least third and fourth impurity regions formed in said channel region, wherein said third and fourth impurity regions are in contact with the drain region and are separated from each other:

a gate insulating film formed over the channel region; and

a gate electrode over the channel region with the gate insulating film interposed therebetween.

wherein each of said first, second, third and fourth impurity regions is doped with an impurity of a conductivity type opposite to that of said source and drain regions.

44. (Previously Presented) The semiconductor device according to claim 43 wherein said first and second impurity regions contain an impurity at a concentration within a range of 1 x 1017 to 5 x 1019 atoms/cm3.

Applicant: Akiharu MIYANAGA et al. Attorney's Docket No.: 07977-0254003 / US3823D1D1

Serial No.: 10/667,899 Filed: September 23, 2003

Page : 3 of 6

45. (Previously Presented) The semiconductor device according to claim 43 wherein said third and fourth impurity regions contain an impurity at a concentration within a range of 1 x 10^{17} to 5 x 10^{19} atoms/cm³.

- 46. (Previously Presented) The semiconductor device according to claim 43 wherein a width of said first and second impurity regions along a channel width direction is 0.05 to $0.3~\mu m$.
- 47. (Previously Presented) The semiconductor device according to claim 43 wherein a width of said third and fourth impurity regions along a channel width direction is 0.05 to 0.3 μm.
- 48. (Previously Presented) The semiconductor device according to claim 43 wherein an interval between said first and second impurity regions is 0.04 to 0.6 μm .
- 49. (Previously Presented) The semiconductor device according to claim 43 wherein an interval between said third and fourth impurity regions is 0.04 to 0.6 μm.
 - 50. (Previously Presented) A semiconductor device comprising:
 - a semiconductor substrate:
 - a channel region formed in said semiconductor substrate;
- a source region and a drain region in said channel region wherein said channel region is located between said source region and said drain region;
- at least first and second impurity regions formed in said channel region, wherein said first and second impurity regions are in contact with the same one of the source region and the drain region;
 - a gate insulating film formed over the channel region; and
- a gate electrode over the channel region with the gate insulating film interposed therebetween
- wherein said first and second impurity regions are separated from each other and are doped with an impurity of a conductivity type opposite to said source region and said drain region, and

Applicant: Akiharu MIYANAGA et al. Attorney's Docket No.: 07977-0254003 / US3823D1D1

Serial No.: 10/667,899 Filed: September 23, 2003

Page : 4 of 6

wherein said first and second impurity regions are overlapped by said gate electrode at least partly.

51. (Previously Presented) The semiconductor device according to claim 50 wherein said first and second impurity regions contain an impurity at a concentration within a range of 1 x 10¹⁷ to 5 x 10¹⁹ atoms/cm³.

- 52. (Previously Presented) The semiconductor device according to claim 50 wherein a width of said first and second impurity regions along a channel width direction is 0.05 to 0.3 µm.
- 53. (Previously Presented) The semiconductor device according to claim 50 wherein an interval between said first and second impurity regions is 0.04 to 0.6 μm .
 - 54. (Previously Presented) A semiconductor device comprising:
 - a semiconductor substrate;
 - a channel region formed in said semiconductor substrate;
- a source region and a drain region in said semiconductor substrate wherein said channel region is located between said source region and said drain region wherein each of said source region and said drain region is provided with a metal silicide layer on a surface thereof;
- at least first and second impurity regions formed in said channel region wherein said first and second impurity regions are in contact with the same one of the source region and the drain region and are separated from each other;
 - a gate insulating film formed over the channel region; and
- a gate electrode over the channel region with the gate insulating film interposed therebetween.
- wherein said first and second impurity regions are doped with an impurity of a conductivity type which is opposite to said region and said drain region.
- 55. (Previously Presented) The semiconductor device according to claim 54 wherein said metal silicide laver comprises titanium silicide.

Applicant: Akiharu MIYANAGA et al. Attorney's Docket No.: 07977-0254003 / US3823D1D1

Serial No.: 10/667,899 Filed: September 23, 2003

Page : 5 of 6

56. (Previously Presented) The semiconductor device according to claim 54 wherein said first and second impurity regions contain the impurity at a concentration within a range of 1 x 10^{17} to 5 x 10^{19} atoms/cm³.

- 57. (Previously Presented) The semiconductor device according to claim 54 wherein a width of said first and second impurity regions along a channel width direction is 0.05 to 0.3 μm .
- 58. (Previously Presented) The semiconductor device according to claim 54 wherein an interval between said first and second impurity regions is 0.04 to 0.6 µm.
 - 59. (Canceled)
- 60. (Previously Presented) The semiconductor device according to claim 50 further comprising at least third and fourth impurity regions formed in said channel region wherein said third and fourth impurity regions are in contact with the other one of the source and drain regions and said third and fourth impurity regions are separated from each other and are doped with an impurity of a conductivity type opposite to said source and drain regions.
- 61. (Previously Presented) The semiconductor device according to claim 54 further comprising at least third and fourth impurity regions formed in said channel region wherein said third and fourth impurity regions are in contact with the other one of the source and drain regions and said third and fourth impurity regions are separated from each other and are doped with an impurity of a conductivity type opposite to said source and drain regions.

62-65. (Canceled)